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BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE – SUBCOMMITTEE ON AVIATION

ON TRANSFORMING THE FEDERAL AVIATION ADMINISTRATION: A REVIEW OF THE AIR TRAFFIC ORGANIZATION (ATO) AND THE JOINT PROGRAM DEVELOPMENT OFFICE (JPDO)

APRIL 7, 2005

Chairman Mica, Congressman Costello and Members of the Subcommittee:

Thank you for inviting us to testify today on the Federal Aviation Administration's Air Traffic Organization (ATO). Professional Airways Systems Specialists (PASS) provides exclusive representation for more than 12,000 of the FAA's systems specialists, flight inspection pilots, procedures development specialists, aviation safety inspectors and safety support staff. Our members install, maintain, troubleshoot and certify this country's National Airspace System (NAS); they inspect, provide oversight through surveillance and enforce aviation regulations throughout the commercial and general aviation industries; and they flight check ground-based systems, develop approach and departure procedures and perform quality analyses of aviation systems.

Created in 2000 by an Executive Order, the ATO combines the FAA's Research and Acquisitions, Air Traffic Services and Free Flight offices into one performance-based organization.[1] Transition to the ATO began in November 2003 when the agency established 10 service units, each with a vice president who reports directly to the chief operating officer. PASS represents more than 7,000 systems specialists, technicians and support staff, primarily within the Technical Operations unit of the ATO. Our members are an essential part of the complex network of people and equipment that ensure the safety and efficiency of the NAS and PASS looks forward to working with the FAA in making the ATO a great success.

According to the FAA, the ATO "was designed to bring a cost and performance management approach to the FAA."[2] PASS strongly supports efforts aimed at increasing the FAA's focus on efficiency and effectiveness. PASS also supports the ATO's goal of operating in a more "businesslike" manner. While we agree that the agency needs to operate in a more efficient fashion, PASS believes that this must not be done at the expense of safety. We appreciate the opportunity to discuss ATO development and assess recent changes made as the FAA modifies the ATO structure and function.

Organizational Structure

In 2000, Congress enacted legislation establishing the Air Traffic Services Subcommittee and created the position of chief operating officer to oversee the ATO.[3] The chief operating officer (COO) is responsible for maintaining the day-to-day operations of the ATO. However, it is troubling that the authority of the COO is subject to the FAA's Human Resources department. What PASS has seen is a division between the efforts of the chief operating officer and those of the Human Resources staff. Decisions made by the operational line of business are subject to approval by Human Resources staff. There is no logical reason for this and it seriously hinders the ability of Russ Chew, or any future COO, to effect meaningful change within the ATO.

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[1] President Bill Clinton. "Executive Order 13180—Air Traffic Performance-Based Organization." *Federal Register* 65, no. 238 (December 11, 2000).
[2] Federal Aviation Administration. February 2, 2005. *Air Traffic Organization Technical Operations Services Service Area Design*: 2.
[3] *Wendell H. Ford Aviation Investment and Reform Act for the 21st Century*, 106th Congress, 2d session, H.R. 1000 (January 24, 2000): 56.

This is a problem that falls squarely on the shoulders of the FAA administrator. The choice to have the COO subordinate to the Human Resources staff is internal to the agency at the administrator level. As long as the FAA chooses to allow its Human Resources staff to oversee and dictate management decisions by ATO officials, the ability of the ATO to change the organization and its culture is severely restricted.

In the past year, the FAA has made changes to the organizational structure of the Technical Operations Services unit of the ATO. In October 2004, Technical Operations realigned nine regional Airway Facilities (AF) divisions and NAS Implementation Centers into three service areas, each managed by a director who reports to the vice president of Technical Operations. PASS is in full support of consolidating redundant functions or services such as those performed in regional offices; however, to date, the changes being made are cosmetic and do not appreciably change the way Technical Operations conducts business.

PASS strongly believes the FAA should continue to consolidate regional functions as well as any other functions duplicated elsewhere. PASS also believes the agency should align organizational boundaries around work locations rather than regional boundaries. PASS does have concerns with other changes the agency is planning to make to its organizational structure. Plans being developed for Technical Operations call for an increase in the number of supervisory and management positions and a decrease in services that directly affect customer service and safety margins. Among the major consequences will be more unplanned outages and longer recover time when equipment fails. The new Technical Operations structure will increase the number and cost of management levels beyond those currently in place, while field technical staffing numbers continue to fall. If the agency truly wants to improve efficiency and streamline operations, it needs to build the organization from the bottom up rather than from the top down.

PASS believes the agency can restructure and achieve improved efficiency if it focuses on providing the services needed by users of the NAS rather than looking for ways to operate without the resources necessary to provide those services. The agency must begin to request sufficient funding if it is to achieve its goal of improved efficiency while maintaining a high level of safety.

Staffing

In order for the ATO to be successful, the agency must hire additional technical employees (systems specialists, electronics technicians and computer specialists). The FAA is currently over 400 below its minimum staffing level of 6,100, which, in January 2000 as part of its new collective bargaining agreement with PASS, it agreed was the absolute minimum number of technical employees necessary to safely maintain and certify the radar, navigation and communications equipment that make up the air traffic control system. Starting in 2003, staffing fell below this critical threshold and the downward trend has continued to date. As of February 2005, there were only 5,690 technical employees—the lowest number on record. PASS believes that the agency must adhere to its own standard and immediately hire enough technical employees to satisfy the 6,100 minimum in order to keep the NAS operating safely and efficiently.

Despite legal rulings ordering the FAA to increase staffing to at least 6,100, the FAA has continued to refuse to comply with the staffing agreement. On February 7, 2005, PASS was forced to file an unfair labor practice charge against the FAA for noncompliance. PASS also learned that attrition in safety-sensitive positions in 2004 was 40 percent higher than average, worsening the already critical staffing crisis.

As a result of inadequate staffing, FAA employees are being forced to work longer hours and accumulate more overtime. The agency claims that it is intent on cutting spending; yet, in FY 2003, overtime costs totaled $18.4 million, an increase of 50 percent from the 2000 figure. The numbers for 2004 indicate a similar pattern, exceeding even the 2003 amount. In its FY 2006 budget request, the FAA asked for $5.4 million to hire and train 258 field maintenance technicians. This amount is less than the increase in maintenance technician overtime since 2000. The cost of hiring additional specialists would be more than offset by reduced overtime costs.

Furthermore, inadequate staffing intensifies many of the problems already plaguing the agency. The low staffing numbers make it increasingly difficult for employees to conduct or receive training, which threatens their ability to perform their jobs in the most efficient and effective manner possible. The staffing situation also has had a negative effect on employee morale—employees are overworked, pressured for quick turnarounds, and often forced to cancel leave or come to work when sick in order to make up for the lack of staffing. Additionally, when employees are willing to transfer to locations where critical staffing shortages exist, they are denied, even if the move is at no cost to the agency. Since staffing is low everywhere, allowing anyone to move creates additional staffing problems.

In PASS's view, the understaffing issue must be corrected immediately. Although the ATO might look good on paper, the goals of the organization cannot be achieved until it has sufficient staff. PASS believes the agency must ask for the funding necessary to hire the technical staff needed to efficiently and safely maintain the NAS.

Maintenance and Certification

The core function of FAA systems specialists is to maintain and certify systems and equipment within the NAS. According to FAA Order 6000.15D – General Maintenance Handbook for National Airspace System (NAS) Facilities, "certification is the quality control method used to ensure NAS facilities are providing their advertised service." The current certification program sets a maximum time interval between certifications and certification parameters must then be checked by credentialed individuals to ensure the system or equipment is still providing the advertised service.

As part of the ATO initiative, the agency is turning away from a maintenance and certification program that has been in place for 30 years and has been a key element in maintaining the safest and most reliable air transportation system in the world. The agency is proposing to move to a Reliability Centered Maintenance (RCM) method where periodic maintenance and certification of NAS systems and equipment will be significantly reduced. Inadequate staffing has left the FAA without enough people to uphold its time-tested maintenance and certification program. Instead of hiring additional employees, the FAA is changing its maintenance approach, claiming

a move towards efficiency; in reality, PASS believes this change will place aviation safety at risk and is merely an attempt to mitigate the impacts of inadequate staffing.

Under the ATO plan, specific guidelines to determine if certification is required will be replaced with guidelines to determine if it will be "cost effective" to certify the system. In other words, the RCM concept is a move away from a proactive maintenance philosophy towards a reactive one. Imagine not performing "preventive maintenance" on your car, such as checking the oil, brakes, or tires, and only addressing issues when an accident occurs because the brakes failed or you are stranded when a worn tire finally bursts. Now imagine not performing similar preventive maintenance when the safety of the flying public is at stake.

Rather than conduct preventive maintenance checks of equipment, the FAA will wait until the equipment fails. Planned system down time will be replaced by unplanned system down time, which is longer and more disruptive. If certification parameters are only checked after a hard failure, most intermittent or soft problems will not be found. This new philosophy not only poses a serious threat to the safety of the flying public, but is also a blatant waste of agency time and resources.

In addition, the agency's plan will worsen the current problem of maintaining the proficiency of its technical workforce. In the past, sustaining technical proficiency was essentially assured when the specialist used the appropriate skills and knowledge on a frequent basis while performing preventive maintenance. As the agency has implemented new systems into the NAS, it has greatly decreased the amount of preventive maintenance performed on those systems when compared to the equipment being replaced. Yet, systems specialists must still be proficient with the operating systems and software being used on the new systems so they can readily diagnose and correct system failures. Decreasing periodic maintenance will only increase the length of time it takes to restore failed systems, resulting in longer outages and increased cost to users, and will further reduce the proficiency of the FAA's technical workforce.

Several years ago, the FAA attempted these concepts under a different name. The agency's test of its Corporate Maintenance Philosophy (CMP) in Alaska had less than favorable results. Under this philosophy, as with the RCM concept, maintenance was eliminated and system certification intervals were lengthened. This did lead to initial cost savings, but only because staffing was reduced. However, the eventual increase in operational problems within the NAS resulted in an increase in work beyond the capacity of the few remaining technicians. Four years later, the region is still recovering although the program has been terminated. In PASS's view, if implemented at the national level, there is no reason to believe that the results will be any different from what occurred in Alaska.

The FAA refers to RCM as an "event-based" concept. A more apt description would be a "fix-on-fail" method. The United States has the safest aviation system in the world—the FAA should not tamper with that system in an attempt to cut corners related to vital functions such as maintenance and certification. As the FAA is working on this proposal, PASS recommends that the committee act expeditiously to conduct a thorough review of the FAA proposed changes to the maintenance and certification program. We believe the FAA should provide the committee with the specific effects that such changes would have in relation to NAS safety and efficiency,

unplanned outages, recovery time when equipment fails and the agency's ability to maintain a proficient workforce. Since these proposed changes have the potential to significantly affect public safety, PASS recommends that no changes be made to the current program for NAS maintenance and certification of systems, subsystems and services until the committee has an opportunity to complete its oversight responsibility.

Labor Distribution Reporting

One of the tools the agency is using to track costs and activities is a financial software program called Labor Distribution Reporting (LDR). As developed and deployed by the agency, however, LDR is not capable of accurately accounting for an employee's time spent performing work on the NAS. Furthermore, countless problems with the cumbersome program do nothing to help the agency increase efficiency.

In 1996, Congress mandated that the FAA implement a cost accounting system as part of a "fee for service" initiative. As part of that mandate, the FAA was directed to break down labor costs according to project or activity.[4] Instead of buying readily available off-the-shelf software to accomplish this labor tracking, the FAA chose to use LDR, its own financial software program that was originally developed to track the activities of air traffic controllers. As such, the program had to be modified significantly even to make it useable by other FAA employees.

Users are directed to enter codes that corresponded with their work into the LDR program. According to the FAA, once compiled, this data will be used to assess and measure the cost efficiency and effectiveness of the agency's management of services, programs, projects, special initiatives and assets. Unfortunately, LDR does not accurately reflect the work FAA employees perform, and consequently, cannot be used to measure or improve FAA efficiency and effectiveness.

In addition to being a labor-intensive process, the specific problems associated with LDR are rampant. The sheer number of codes makes it nearly impossible to determine the code that appropriately reflects the work performed. When there is a code to describe the work, there are often several codes that could apply, and employees have not received any training for deciphering the differences. More often, however, the agency has chosen generic descriptions for large segments of the work and there are no codes that describe the specific types of work specialists and support staff perform. In relation to systems specialists who work on a variety of NAS systems, the lack of NAS system-specific codes makes it impossible to reflect their work time accurately. Insufficient standardization between different facilities exacerbates the problems. Furthermore, employees encounter persistent difficulties when attempting to enter overtime into the program. As discussed previously, overtime has increased greatly in the past few years. If overtime is not being accurately recorded, as well as the several other types of work for which there are no codes, the program cannot provide an accurate report of costs.

While PASS agrees that the agency needs to develop a vehicle for accurately reflecting the time and costs associated with working on the NAS, the current LDR system is obviously not that vehicle. PASS recommends that the FAA conduct a full and complete reevaluation of the system.

[4] *Federal Aviation Reauthorization Act of 1996*, 104th Congress, 2d session, H.R. 3539 (January 3, 1996): 36.

Modernization

A large responsibility of the ATO is in the area of acquisitions. As stated earlier, the FAA's Research and Acquisitions office was absorbed into the ATO in an effort to increase efficiency and communication within the organization. Unfortunately, we are hearing from many people in the field that there is a serious lack of communication between the different program offices, resulting in what PASS members view as a tremendous waste of time and resources.

Until the FAA began to transition to the ATO, PASS was involved in many of the agency's modernization programs. Over the last two years, however, the FAA has systematically eliminated PASS participation in all but a few programs. As Congress has seen over the years, involving the employees who use and operate the systems in development of those systems greatly improves the ultimate product and inevitably saves the agency money. PASS believes the agency must reconsider its approach to modernization and once again involve the employees who will ultimately play a large part in any modernization effort.

In addition, the FAA could save time and money in the area of software acquisition. Several years ago, the FAA realized that custom-made proprietary system hardware acquisition was unreasonably expensive for the agency and left the FAA helpless with regard to logistical support, modifications and upgrades. Accordingly, the agency moved towards purchasing commercial off-the-shelf (COTS) hardware for new automation systems. However, at the same time, the agency moved into a pattern of purchasing sole source proprietary software to run these automation systems. Quite simply, the FAA decided to purchase software in exactly the same way it decided not to purchase hardware. This decision was made without considering that the same problems associated with the hardware would logically be associated with the software, resulting in the agency essentially being held hostage to the sole source owner of the software code for any changes, system expansion or improvements, just as it was in the past for hardware.

While the development of major software may be beyond the capability of the agency, the maintenance and modification of it is not. This is something the agency could easily do in house, and does quite efficiently where it is allowed the opportunity. As it stands now, the sole source proprietary owner gains years of noncompetitive profits at the taxpayers' expense, and, should the agency decide to seek a different provider in the future, it will have to pay again for development of the software. In order to save the agency and the taxpayers money, PASS recommends that the agency be prohibited from procuring any sole source or proprietary software unless full rights to the code are included.

Technical Training

A key factor in the agency's move to a performance-based organization was to incorporate NAS modernization with NAS operations, thereby eliminating the traditional disconnects that led to previous large-scale failures in major acquisitions. Having lived through those failures and currently living with the results, PASS fully supports merging these two organizations under one umbrella.

When looking at NAS modernization, PASS believes that it is about more than hardware and software. If the systems and equipment are upgraded while the employees who operate and maintain those systems are held to the current philosophy and methodology for providing training, modernization will ultimately fail. PASS believes that the success of the ATO is directly tied to adequate training of the technical workforce. In the 2000 Air Traffic Services Training Plan, the FAA stated that extended absences from the workplace required under the centralized training model, which involved sending employees to the FAA Academy in Oklahoma City to receive training, were "costly, in not only travel and per diem dollars, but also in overtime costs." The FAA continued by stating that training needed to be "delivered more efficiently, with reduced impact on daily operations." PASS wholeheartedly agrees with these statements.

Unfortunately, the FAA has not made the delivery of efficient technical training a priority and has now suddenly decided to return to the inefficient centralized approach. Today's staffing numbers simply do not allow for a centralized approach to training, which requires specialists to be away from their home facilities for weeks, even months, at a time.

Another type of training, on-the-job training, is a critical element of technical training, the purpose of which is to provide both technical knowledge and familiarity to specialists in their own operational environment. This ensures that specialists are familiar with local nuances in procedure, facility layout, communication and power infrastructure, and other site- and system-specific details. Under the agency's plan, on-the-job training will be effectively eliminated, wasting both time and money. For example, in many facilities, new hires are now being sent to Oklahoma City on travel and per diem for training that formerly was done on site. In other words, what used to be performed on the job and with no expense to the agency other than the employee's salary is now a hefty additional expense that takes employees out of the working environment. Plus, on-the-job training often has to be repeated back at the facility when the specific field setup is different from the Academy setting.

There are numerous examples where technicians who are not trained on certain systems are forced to call another technician to the site in order to remedy a problem, resulting in increased delays. This manner of operations is simply inefficient. FAA employees require training in order to protect and maintain the NAS; yet, the FAA insists on making this training difficult to obtain by mandating it be done in only one centralized location. Furthermore, the ATO specifies no direct cost saving from moving to this approach. In fact, at a briefing for PASS, agency managers stated that the concept was based on the managers' "perceptions" that it would be more efficient for the agency.

Congress has already recognized the shortcomings of this centralized approach. In fact, in 2004, the FAA was directed by the Congress to "shift its technical training focus to a de-centralized model, in fiscal year 2005." Congress agreed that the de-centralized approach would "provide the most effective use of resources available with the least impact to NAS operations."[5] By doing so the agency would not only reduce the impact on operations caused by sending employees to

[5] U.S. House of Representatives, Committee on Appropriations, *Departments of Transportation and Treasury and Independent Agencies Appropriations Bill, 2005*, 108th Congress, 2d session, September 8, 2004, H. Rept. 108-671, 17.

Oklahoma City, it would also save on the cost of training that goes along with a centralized model, such as travel, per diem and overtime. PASS encourages the committee to review the agency's approach to technical training and provide needed oversight to the agency.

Conclusion

PASS supports the goal of improving efficiency and effectiveness within the ATO. We believe, however, that the FAA needs to reexamine strategies within the plan in order to realize any measurable improvements. PASS is interested in working closely with the FAA to realize a successful future for the agency that is economically efficient while continuing to provide the highest level of service and safety to the American flying public.